

Ehrlich between the granular cells and the lymphocytes and between myeloid and lymphoid leukemia have been broken down. This does not mean that all distinction is lost and that myeloid and lymphoid leukemia become identical. They probably represent two different diseases which must be histologically and etiologically separated. But a large number of transition forms do occur.

SURGERY.

UNDER THE CHARGE OF

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An Experimental Study of Suture of Arteries, with a Description of a New Suture.—DORRANCE (*Annals of Surgery*, 1906, xlv, 409) reviews the methods in use, with their advantages and disadvantages. He then describes his method and gives in detail his experiments on nine horses and five dogs. The method consisted in approximating intima to intima with a continuous through-and-through mattress suture modified by going back one-half a stitch every third suture, in order to overcome purse-stringing; over this he placed a continuous overhand suture. Special stress is laid on the following points: (1) Whatever suture is used the principle of placing intima to intima is absolutely essential, and (2) the suture and fringes of the intima should not be exposed to the blood stream.

Suprahyoid Pharyngotomy.—v. HACKER (*Zentralbl. f. Chir.*, Nov. 10, 1906) says that the technique of oblique or transverse pharyngotomy has been developed from observations made upon suicidal wounds occurring in this region, which, in general, lie chiefly below the hyoid bone. The view obtained of the entrance into the larynx and pharynx, through a suicidal wound, and the healing which followed, led to the development of suprahyoid pharyngotomy as an operation. A similar suicidal wound above the hyoid bone suggested the performance of suprahyoid pharyngotomy. Hoehner has recently, again, recommended very highly the suprahyoid operation. He avoids tracheotomy when possible, performing it secondarily only when a laryngeal nerve has been wounded. When tracheotomy is not done he places the body in an oblique position. He does the operation under local anesthesia with applications of cocaine solution to the mucous membrane. v. Hacker found this method very satisfactory in two cases in which he did thyrotomy, or splitting of the thyroid cartilage, for the removal of cancers of the larynx.

It was Jeremitsch, of Moscow, who, in 1895, first recommended suprahyoid pharyngotomy in place of the subhyoid operation, in consequence of observations made in the treatment of a suicidal wound above the hyoid bone. The gaping wound gave a very free exposure of the entrance to the larynx, and of the posterior and upper part of the pharynx, and was closed with a primary suture.

The special advantages claimed for this operation are: the greater room and freer access afforded, especially when an operation is to be done on the root of the tongue or the whole of the tongue is to be extirpated; and above all it avoids the danger of wounding the laryngeal nerve, while the epiglottis is not in the least danger. v. Hacker confirmed these statements of Jeremitsch on the cadaver, and this led him to try the operation in the living when a suitable case presented itself. This was a round-cell sarcoma of the base of the tongue, in a man aged sixty-three years, who was very much emaciated and weakened. Because the patient desired narcosis it was given and was administered through a high tracheotomy wound, with the body in an oblique position and the head depressed. The incision was carried on each side to the edge of the sternomastoid. The lymph glands were easily removed, and the lingual artery ligated on each side beyond the cornu of the hyoid bone. After division of the muscles (mylohyoid, geniohyoid, and hyoglossus) access to the base of the tongue and, finally, to the posterior and upper part of the pharynx was very free. The rather large tumor, with a part of the epiglottis which was in the grasp of the tumor, was easily removed with the thermocautery. The remaining parts of the tongue were brought together throughout, the divided muscles were united, drainage was placed in the lateral angles of the wound, and the cannula removed. The healing of the wound was normal. Symptoms of heart weakness set in, however, and on the tenth day the patient died. He had been nourished through a tube in the nose. The autopsy showed degeneration of the heart, hypostatic pneumonia, and marasmus. The wound healed by first intention.

The suggestion is made that because of the free access to the posterior and upper part of the pharynx this operation should be done as a preliminary step in the removal of nasopharyngeal tumors. v. Hacker believes that it will prove to be a very advantageous operation.

Rupture of both Kidneys, with Intraperitoneal Hemorrhage; Removal of all of the Left Kidney and Part of the Right Kidney.—FRANKLIN (*Amer. Jour. Surg.*, 1906, xx, 309) reports the following very interesting case: A girl, aged sixteen years, fell a height of four feet from a car, landing on her abdomen across a rail. She felt that she "had torn something loose on the inside," and, although she had some pain, she walked home, a distance of about a quarter of a mile. When seen by Franklin, about an hour later, she had a temperature of 98° and a pulse of 127, with other symptoms indicating severe shock. She vomited a greenish material several times. The abdomen was distended, the right rectus rigid, the right kidney region tender, with dullness on the right side, especially in the right iliac fossa (the patient was lying on her right side). By catheter two ounces of very bloody urine was withdrawn. Intraperitoneal rupture of the right kidney was diagnosed. Owing to objections on the part of the patient and her parents the operation was

not begun until about eighteen hours after the accident. She stood the operation well for the first hour, but later did poorly because of the great loss of blood. A large quantity of blood and urine was found in the peritoneal cavity, which was cleaned out and flushed with normal salt solution. The right kidney was found low in the abdomen, lying directly in front and over the third and fourth lumbar vertebrae. It showed three transverse rents and was tied at its lower pole to the left kidney by a dense fibrous band a half-inch in diameter (horseshoe kidney?). The left kidney was literally torn into fragments, entirely without a capsule, and separated from the ureter. The vessels of the left kidney were ligated and all the pieces removed. A portion of the right kidney, which had been mashed into a pulp, was removed also. The remaining portion of the right kidney (not more than two-fifths of the original kidney substance) was in a very bad condition and showed two rents. It was packed with gauze. The abdomen was filled with normal saline solution after repeated flushings, then closed with through-and-through sutures of silkworm-gut, and drained. After-treatment for the shock was carried out. From the time the reaction set in, ten hours after the operation, the patient did well. The gauze was removed on the sixth day. A urinary sinus followed, through which most of the urine passed for the next five days. It closed on the sixteenth day. The patient sat up on the thirteenth day and left the hospital on the twenty-third day. She has enjoyed good health ever since (now more than six months) and passes a normal amount of urine.

Treatment of Tuberculous Abscesses.—STARR (*Brit. Med. Jour.*, 1906, ii, 923) says that abscesses following tuberculous bone disease, so long as they remain quiescent as closed sacs and do not become infected, add no danger element to the local or general condition. It is well known that a proportion of abscesses if properly treated disappear in the patient suffering with bone lesion. If the abscess is allowed to open spontaneously it will become infected very quickly with septic organisms. On the other hand, if it burrow too close to the skin, one of two things may happen: it may become infected with the organisms from the hair follicles or sweat glands, or the skin may become invaded with the tuberculous disease. As to treatment, aspiration has several advantages, but generally is not advisable. The injection of germicidal agents does not seem reasonable, as any agent which can be safely injected into a closed sac without endangering life can scarcely be expected to have any beneficial effect. Excision of the sac entire cannot be carried out in any of the abscesses from spinal disease, but is a perfect method for very small abscesses that are free of the joints in accessible parts of the extremities. Incision and drainage always result in a long-continued discharging sinus, often endangering the life of the patient and always making his condition annoying. Incision, evacuation of the contents, curetting of the wall, and closing of the wound constitute the treatment of choice. Of fifty-five cases so treated by Starr, seven afterward broke down, while the remaining forty-eight, so far as can be traced, have remained perfectly closed and aseptic for periods varying from four months to six years. Only five of the series required a second evacuation of contents, and one a third.

The Treatment of Wounds after Transplantation.—WEISCHER (*Zentralbl. f. Chir.*, June 23, 1906) objects to the open-wound treatment after Thiersch's skin grafting, because the discharge coagulates at the edges of the grafts and being retained underneath separates it. Nor does he believe with Isnardi that it is necessary to wait six weeks for the development of a proper granulating surface, in large traumatic defects of the skin surface. Only too frequently the back and posterior surfaces of the extremities are involved where it is difficult to relieve the pressure, and, therefore, to obtain a clean granulating surface. The wounds are frequently impregnated with dirt and oil. In relatively small wounds when the discharge is slight and serous, little difficulty in healing arises, whether the open method or the boric ointment and compression treatment are employed. When the secretion is abundant and purulent, very rarely can one obtain a wound that is entirely free from pus. The abundant streaks of pus which are usually present can be washed away with saline solution. The upper layers of the granulation tissue are then evenly removed with a proper knife, giving a smooth surface upon which to spread out the grafts. On a limb the part should be bloodless during the grafting, and when the Esmarch bandage is removed the hemorrhage should be controlled by the application of layers of lint moist with warm salt solution. Because the heat quickly disappears, warm water should be poured on almost continuously for about fifteen minutes or a half hour. Then the wound and grafts are covered with a layer of lint and that with cotton, both moist with the warm salt solution, and a bandage applied. When in bed the patient should have a wide mackintosh under the part and a wire frame over it to prevent contact of the bed-clothes with the dressings, and to favor evaporation of the discharge. Every two or three hours for two days, fresh, warm salt solution should be dropped on the dressing, until it is felt by the skin. This dressing favors the escape of the discharge from under each graft, prevents coagulation at the edges, retention under the grafts, and their separation from the granulating surface. The dressing is first renewed in forty-eight hours, after thoroughly soaking it. After two more days a boric ointment dressing is substituted. Weischel obtained a 100 per cent. of "takes" in three-quarters of the cases, 80 to 90 per cent. of "takes" in one-quarter, and did not completely fail in any.

High Hemorrhoids as a Cause of Occult Blood in the Stool.—GOLDMANN (*Zentralbl. f. Chir.*, June 30, 1906) says that from methodical examination of the rectum with a protoscope during recent years, he has several times found highly situated hemorrhoids to be the cause of obscure hemorrhages from the bowel. In one case about 10 cm. above the anus he found on the anterior surface of the rectum, small dilated prominent veins. From some, blood was oozing, while others were covered with clotted blood. The remaining mucous membrane in this region was the seat of a slight catarrh, but was otherwise normal. With a specially devised galvanocautery the veins were destroyed, through a protoscope. A complete and permanent cure followed. Schreiber has localized solitary and multiple varices, 15, 16, and 19 cm. above the anus. He found venous anomalous conditions in not less than 10 per cent. of the cases he examined. The treatment of such hemorrhoids can only be operative, and they can be easily and permanently removed by the galvanocautery.

Appendicitis in Nursing Children.—KIRMISSON and GUIMBELOTT (*Revue de Chir.*, 1906, xxvi, 441) collected 26 cases under two years of age, 9 occurring in the first year and 17 in the second. Of the 26, 19 died and 7 were cured. Of the 9 cases occurring in the first year, all died. The 7 cases cured were all under eighteen months of age. Operation was performed in 19 cases, 7 in the first year and 12 in the second; 7 were cured and 5 died. From these facts Kirmisson and Guimbelott draw the following conclusions: Appendicitis in the first two years of life is not as rare as has been thought. Its evolution is rapid and its prognosis extremely grave. The only cases cured up to the present were those in which operation during the attack was performed; therefore, the indication to operate immediately seems clear. The greatest difficulty in reaching a decision to operate is the difficulty in making a diagnosis. Kirmisson and Guimbelott consider that it is, therefore, desirable that all cases of this kind be published.

Hemorrhage of the Scalp in Operations on the Skull.—KREDEL (*Zentralbl. f. Chir.*, 1906, xxxiii, 1137) controls the always unpleasant and sometimes dangerous hemorrhage of the scalp in brain operations by a method which he considers simple and rapid. Before the incision is made, he applies two narrow metal plates to the scalp, by a ligature passed under the scalp along the bone, the plate and ligature on each side of the incision being parallel to the incision, and about 1.5 cm. from it. The plates may be from 5 to 7 cm. long, or shorter, and in case the longer are to be employed, it will be best to bring the needle out about the middle of the plate and to reintroduce for the rest of the distance covered by the plate. The two ends of the ligature are then caught in a notch at each end of the plate, and are tied and knotted over it, thus compressing the tissues of the included portion of the scalp between the ligature and the plate. According to the length of the incision, one or more plates may be used on each side of the incision. The plates are 1 cm. wide, 0.5 cm. thick, of variable length, and slightly curved to fit the vault of the skull. It may also be curved or straight to adapt itself to the shape of the scalp incision. These curves, however, should not be too marked, because the tightly drawn ligature tends to form a straight line between the two ends of the curved plate, so that the included scalp is not compressed properly. This can be prevented by passing a second smaller ligature around the plate and first ligature at their middle, to prevent them from sliding away from each other.

Bier's Treatment in Tuberculosis and Acute Infections.—AUFFRET (*Revue d'Orthopédie*, 1906, vii, 481) says that Bier applies his treatment to very diverse conditions, infectious and non-infectious, acute and chronic; but he embraces under it three different modes of treatment, all having the same object, congestion of the affected part. He thus includes hot baking, compression by the elastic bandage, and aspiration with cupping glasses or a special apparatus. Hot baking and the aspiration method are recommended in the non-infectious conditions; the former in chronic rheumatism, arthritis deformans, old arthritides, and chronic oedemas; the latter when one wishes to exercise a more energetic action (old traumatic lesions, etc.). The cupping apparatus of Klapp should be employed in the localized infections when pus

has already formed, particularly in mammary abscesses and buboes, furuncles, lymphatic glandular abscesses, and superficial panaris. The anodyne effect of the elastic bandage upon the pain makes it the treatment of choice in gonorrhoeal arthritis, because it soon permits immobilization. The anesthetic and bactericidal properties are of advantage in painful affections, as acute arthritis, early metastatic foci, and infected wounds. In the presence of grave suppuration (osteomyelitis, suppurative arthritis, deep phlegmons, panaris, etc.) the first indication is to make a free incision for the escape of the pus; but the venous stasis renders service of secondary importance. It aids in the formation of an oedema of which the bactericidal properties seem proved. It facilitates the escape of pus and permits in many cases the early stoppage of packing and drainage.

An Ideal Retention Bandage for Inguinal Hernia in the Infant.—FIEDLER (*Zentrabl. f. Chir.*, 1906, xxxiii, 1161) says that the non-operative treatment of this condition sometimes offers difficulties. Those methods in present use frequently fail, because they do not remain firm on these restless patients. The unavoidable soiling of the apparatus leads to eruptions of the skin, infection of the lymph glands, and pain from pressure of the apparatus. Fiedler improvises a supporting apparatus from a layer of white woollen yarn, of about twenty to thirty strands. He makes of these a loop about 35 to 45 cm. long, according to the size of the patient. The ends of these are fastened together by two pieces of white, slender, linen bands. The hernia is first reduced, the loop is passed around the body, and the ends, tied together by the linen bands, are passed through the loop. The point of crossing through the loop is made to lie over the hernial orifice, and the ends are drawn tightly around the thigh and fastened by the linen bands to the girdle about the abdomen. The hernia can be kept in place by the elastic pressure, while the apparatus is so cheap and easily made that it can be frequently changed and kept clean.

A Contribution to the Operative Technique of Orchidopexia.—DE BEULE (*Jour. de Chir., et Annal. de Soc. Belge de Chir.*, 1906, No. 8, p. 390) describes his method of operation as follows: After drawing down the testicle, he incises the skin of the fundus of the scrotum anteroposteriorly for about 3 cm. and brings the testicle out of the incision. A second incision of the same length in the axis of the limb is made in the thigh below the genitocrural crease, well within the femoral vessels and down to the deep fascia. The testicle is then sutured into the bottom of the thigh incision to the deep fascia, the outer edge of the scrotal incision having first been sutured to the corresponding edge of the thigh incision. The remaining corresponding edges of the scrotal and thigh incisions are then sutured together and the entire wound thus closed. The sutures holding the testicle to the deep fascia of the thigh pass through the tunica vaginalis and albuginea. A gauze and collodion dressing is laid over the circular line of sutures, which hermetically seals it. If the patient is a child, he is watched carefully for a few days, and his knees are tied together to prevent abduction of the thigh, and, therefore, tension on the wound. The sutures are removed in ten to twelve days, when the patient may get up and walk.

Later, the connection between the scrotum and thigh is divided, the testicle being carefully separated and the wounds in the scrotum and thigh closed. De Beule has obtained excellent results in two cases, which were far from being favorable.

THERAPEUTICS.

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The Serum Treatment of Exophthalmic Goitre.—G. A. WATERMAN (*Boston Med. and Surg. Journ.*, 1906, No. 7, p. 165) reports five instances of Graves' disease treated by means of hypodermic injections of serum derived from blood drawn from the jugular vein of a goat, two weeks or more after the removal of the thyroid gland. Two of the patients are considered as cured, two improved, and one unimproved. Waterman considers this number insufficient for estimating the value of the treatment, but, looking over all the instances in which serum-therapy has been employed, he feels that in this method we have a means which influences the disease favorably, and which may, with further modification, prove of more uniform value. In his opinion, it may be along this line or by the use of cytotoxic serum, which has been so successfully used by BEEBE and ROGERS (*AMER. JOUR. MED. SCI.*, vol. cxxxii, No. 1, p. 149) that we are to find a specific means of relieving the distressing symptoms of this most troublesome disease. The doses of the serum employed were from 15 to 45 mm., given at first daily, the intervals being increased as benefit was obtained. Continuation of the treatment for months is necessary.

Serum in Exophthalmic Goitre.—S. P. BEEBE (*Jour. Amer. Med. Assoc.*, 1906, xlvii, 66) concludes a paper upon this subject as follows: "When all the conditions are considered, I believe it is fair to conclude that the serum is an agent of considerable value in the medical treatment of exophthalmic goitre. It has been used in all manner of cases in which it was possible to make a diagnosis, and in some cases in which the diagnosis was doubtful. Only a comparatively small percentage of trials has resulted in failure, a much larger number in improvement, while an encouraging number of individuals have been completely cured. In making up statistics, all the cases of which we have any record have been included. A number of the patients have begun